

Although the petition refers to separation of bandwidths, it neglects to recommend alternative band segments below 28 MHz. Without a more comprehensive recommendation, this petition effectively seeks elimination, not separation, of Pactor III.

I favor the present FCC rules which provide few limitations on bandwidth of digital data signals. This encourages amateur radio operators to advance the state of the art of digital technology.

I oppose the RM-11392 petition by Mark D. Miller seeking to change Amateur Radio Service automatically controlled data stations and narrower bandwidths on HF.

I use automatically controlled data stations and networks on the HF amateur radio bands very often. The ability to have wider bandwidths and freedom to pick any clear frequency in the data subbands is essential for the effective operation of these systems. The services these systems provide are essential for emergency communications, furthering the purpose of amateur radio, and they are part of amateur radio's reason to exist. Please do not limit their bandwidth or spectrum any further than the existing rules already do. If anything, please expand the automatic subbands, because there has been a very large increase in use of these as technology has advanced since the rules were written.

Please abolish the 300 baud symbol rate limit, because it prevents the amateur radio service from utilizing existing federal standard digital data methods for interoperation, inter-service compatibility, economical equipment, and common signalling methods.

Please do not implement any of the provisions of the RM-11392 petition. They would set ham radio back to the stone age of HF digital data communications.

RM-11392 petition has not presented a compelling need to change the rules for Automatically Controlled Data Stations on the HF bands.

Several of the primary established HF emergency communications networks currently in service and utilized by thousands of Amateur Radio Operators in USA would be totally eliminated or hobbled if the objectives of the RM-11392 petition were to be adopted.

The FCC Amateur Radio Service's automatically controlled data sub-bands are already too narrow for the huge volume of traffic that runs on them. If a limit of 1.5kHz bandwidth is applied, it will severely hamper the ability of amateur radio operators to share these small band segments efficiently through rapid data time division methods.

The RM-11392 petition seeks to destroy digital data technology advancement in the Amateur Radio Service.

The RM-11392 petition seeks to re-define an automatically controlled data station. The present definition has served the amateur radio service very well. Please do not change it in the way the petitioner seeks. Instead, please expand the subbands for automatically controlled data stations. The automatically controlled data station subbands are already too narrow on the 40 meter band (5kHz), the 80 meter band (15kHz), and the 17 meter band (5kHz).

The RM-11392 petition's proposed 1.5kHz bandwidth limit on data emission is too narrow for established international standard transmissions and equipment bandwidths used by the Amateur Radio Service.

#### Comments regarding RM-11392

I understand and respect the technical analysis performed by the petitioner. I disagree with the conclusions and recommendations, and I oppose this Rule Making petition.

I believe there is a consensus among those licensed in the U.S. Amateur Radio service that regulation by bandwidth, not mode, is long overdue. The unresolved questions are around how best to implement these changes. The petition provides little more than a thorough re-statement of the problems, and few practical recommendations to resolve them.

I disagree with the petitioner's opinion that "Emissions have crept into the narrowband RTTY/Data subbands in the 80 through 10-meter bands that are not appropriate for the RTTY/data subbands." Perhaps the petitioner used the word "crept" to describe the slow pace of innovation for digital communication techniques occurring in the U.S. compared to that in countries where the Amateur Radio regulations are less stifling, such as most European countries. Technical innovation and advancement is one of the five purposes for which the Amateur Radio service exists. I am unable to find in the regulations any value guidance as to what emission types are appropriate or inappropriate, only those which are permitted or not.

I disagree with the petitioner's opinion that "Stations under automatic control have taken advantage of loopholes created by terminology in the commission's rules that is not applicable to new operating modes." The availability of low cost digital signal processors (DSP) in nearly every personal computer of the past 20 years provides the capability for experimentation and often easy implementation of newer modes. This occurs far more rapidly than regulatory bodies can document. The so-called "loopholes" were intentional, to facilitate and encourage precisely the type of experimentation and innovation we see occurring in digital communications techniques.

Introduced by Special Communications Systems, GmbH&Co. KG, in 1995, PACTOR®-III can hardly be considered a "new" mode. Just the opposite is true. Its introduction preceded "new" and popular

sound card DSP-based modes such as BPSK (1997), QPSK (1997-98), MFSK16 (2000), and Olivia (2003).

The petitioner's request to re-define an "unattended station responding to interrogation by a station under local or remote control" as an automatically controlled digital station would directly affect hundreds of such individual stations, and thousands of users. This is the petitioner's expressed intent. This request is in defiance of the more than 20-year history of these stations' successful operation during normal and disaster situations. This change would impose significant restrictions not only on those Amateur Radio stations operating as part of an organized message delivery network, such as Winlink 2000, but also on individuals choosing to make their station available for use as a message drop for other Amateur Radio operators, regardless of the mode employed. The petitioner presents few benefits that would result from this change.

Without question, the value of organized and coordinated automatic message delivery networks, such as Winlink 2000, has popularized and expanded the number of individual Amateur Radio operators willing to participate by making their station(s) available. This has expanded these types of message networks, not only in the U.S., but also globally. All HF stations in the Winlink 2000 message delivery network operate as unattended stations responding to interrogation by a station under local or remote control.

The value of automated message delivery networks, Winlink 2000 in particular, was cited in the U.S. House of Representative's Select Bipartisan Committee to investigate the preparation for and response to Hurricane Katrina; "A Failure of Initiative." The report said:

"...the NCS coordinated the frequencies used by the nearly 1,000 Amateur Radio Emergency Services (ARES) volunteers across the nation who served in the Katrina stricken area providing communications for government agencies, the Red Cross and the Salvation Army. Emergency communications were conducted not only by voice, but also by high-speed data transmissions using state-of-the art digital communications software known as WinLink."

The value of the Winlink 2000 message delivery network is also observed in its adoption as the model for the U.S. Army Military Affiliate Radio System (Army MARS) in 2006. This is a non-Amateur Radio service, the members of which are predominately by U.S. licensed Amateur Radio operators.

Although the Amateur Radio service does not exist to support local, state or the federal government, the Winlink 2000 system has been adopted by, and individual Amateur Radio stations have been deployed in support of, government at all levels, and non-government disaster relief agencies.

The value of automated message delivery networks is shown in the American Radio Relay League,

Inc.® National Emergency Response Planning Committee Report to the ARRL Board of Directors January 2007. Among the committee's recommendations:

"The establishment of semi-automatic networks should be considered a priority for surviving and mutual assistance resources, but never to the exclusion of voice networks. Forward-based, self-contained mobile or portable equipment should include provisions for all modes of message transport possible, including voice, NTS-Digital, Winlink 2000, WiFi, and others that may be developed in the future. When possible, out-of-area gateway stations should be identified and scheduled to handle messaging in the most efficient method available to both ends of the circuit. If prior arrangements are not possible, the gateway stations in the affected area should immediately identify out-of-area capabilities, and set up the most efficient method of message transfer possible."

The change the petitioner requests would all but eliminate the ability of the currently permitted gateway stations to operate as unattended stations responding to interrogation by a station under local or remote control, even between two individual Amateur Radio licensees that are not participating in an organized message delivery system. This would severely affect the ability of Amateur Radio operators to effectively and efficiently deliver messages following disasters. The petitioner does not present any compelling need for this change, nor the offsetting value.

The petition refers to separation of bandwidths. It fails to recommend alternative band segments below 28 MHz. Without a more comprehensive recommendation, this petition effectively seeks elimination, not separation, of PACTOR®-III.

Amateur Radio operators using non-automatically-controlled modes have many frequency options (almost 900 KHz) below 28 MHz and on every band therein. Claims of undue interference seem disingenuous when they willingly choose to use the narrow allocations where automatic control is authorized.

The petition suggests that PACTOR®-II is just as spectrally efficient, and that the increased bandwidth of PACTOR®-III under favorable propagation conditions is inherently bad. Both arguments ignore the increased data throughput and correspondingly shorter transmission time that go with higher speed and bandwidth provided by PACTOR®-III. Fixed-length messages take less time to transmit at higher speeds, which leaves the frequencies clear for longer periods of time.

The petitioner cites the current rule for HF symbol rate limitation of 300 baud on data transmissions. This rule was valid in the 20th century, when we had simple FSK transmissions. Today's complex digital waveforms using OFDM, MFSK, PSK, and others do not benefit from a symbol rate limitation. The 300 baud symbol rate limit prevents U.S. licensed Amateur Radio operators from communicating Amateur Radio operators of other countries which are using other digital transmission techniques.

The 300 baud symbol rate prevents the U.S. Amateur Radio service from using federal standard digital data methods, such as MIL STD 188-110, for interoperation, inter-service compatibility, economical equipment, and common signaling methods. This rule is obsolete and serves no purpose in the 21st century. Please delete the 300 baud symbol rate limit from the FCC rules.

The growth of interest in all Amateur Radio digital modes indicates the necessity of expanding the current frequency sub-band allocations for these modes below 30 MHz, until such time as practical regulation by bandwidth can be implemented.

I understand and respect the technical analysis performed by the petitioner. I disagree with the conclusions and recommendations, and I oppose this Rule Making petition.

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